Kamloops Model Airplane Society
Tolko Airfield Site Rules 2025

MAAC Approved July 7, 2025

The following rules package must be available to all RPAS Pilots while operating RPAS at this site, either electronically or in print. Nothing in these rules relieves the RPAS pilot of their individual CAR compliance requirements. Any MAAC member attending an Event at this site must agree to attend or obtain any modeller briefing, in group or individually (i.e. arriving late)

ADMINISTRATIVE

Club name: Kamloops Model Airplane Society (#530, Zone C)

Location: 6500 Old Highway 5, Kamloops, BC

Pilot Station Coordinates: 50° 50' 26.40"N, 120° 16' 5.70"W
(50.840667, -120.268250)

Club Contact: Randy Battison, President, 250-319-8869

All persons flying Remotely Piloted Aircraft Systems at this site must:

1. Be members of MAAC in good standing
2. Be members of KMAS or an invited guest and
3. Agree to comply with the MAAC safety code and all other site rules.

Any MAAC member attending an Event at this site must agree to attend any modeller briefing or otherwise read and follow all site/Event rules. The Club or site operator is responsible to take reasonable steps to ensure a modeller briefing occurs for each modeller using the site.

Site Administrative rules

1. Unaccompanied spectators (any observer who is not a club member unless invited) and animals should stay out of the pit area.
2. Pets should always be under the control of the owners.
3. Smoking is not permitted anywhere beyond the spectator fence and is strongly discouraged elsewhere.
4. The club will review these rules annually.

Tolko Field

Tolko field is located at 6500 Old Highway 5, Kamloops, BC V2H 0B7. The Map Coordinates are: N50

degrees 50 minutes 26.20 seconds; W120 degrees 16 minutes 6.23 seconds. The elevation is 1375 feet AMSL. Directions with photos can be found at http://kmasrc.ca/Club%20Location.html

Access To Tolko Field

Entrance to Tolko Field is made through a locked gate off Old Highway #5 East. The KMAS gate lock is secured by the bottom padlock on the Lock Tree. This padlock is keyed for over 40 members keys and is changed each year. If you are the first person to enter and unlock the padlock, please relock the padlock back on the tree, after opening the gate. This is a very expensive padlock and we need to protect it from vandals taking it.

If you are the last person leaving the Field, please:

1. Make sure all chairs and stools are put inside the Hangar.
2. The fan in the left corner of the first room is unplugged, if on.
3. If you used the tractor or opened the tractor doors, check that both doors are latched and locked with the padlock, making sure the rain cover is over the end of the padlock.
4. If you used any keys from the Key Lock Box, return these to the Lock Box.
5. The inner door is closed and locked with the padlock.
6. The outer door is closed and locked with the padlock.
7. The gate is closed and locked with the padlock.

On the table in the first room of the Hangar, there is a binder which contains the Attendance Logbook for persons to sign-in, prior to using the field. Please remember to sign-in so we know who is in attendance, should any questions arise. There is also a container which contains copies of the KMAS Club Rules, which all members need to review and sign.

Site/event emergency response requirements

In the event of an emergency, call (9-1-1) - the site address to be provided to first responders is:

6500 Old Highway 5, Kamloops, BC

Fire Protection And First Aid

Battery Fires - There are two white sand pails for battery fires. They are under the sun shade against the wooden posts, one on each side. If there is a battery fire, simply pour sand from one of the pails on the battery, until it is completely covered, and the oxygen supply is cut off.

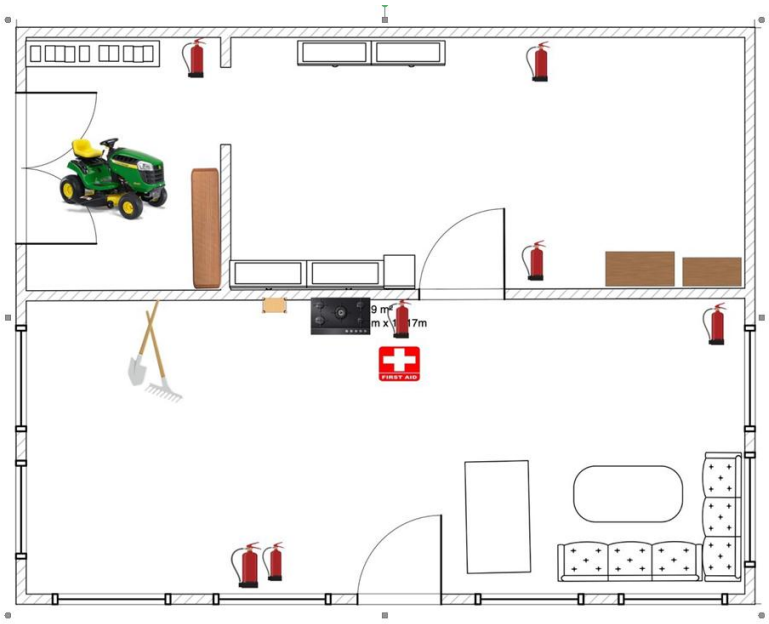
If the fire is the result of a crash and is in the long grass or wooded area, another member should also respond with a fire extinguisher, in case the grass catches fire. There is a fire extinguisher on one of the poles under the sun shade with the sand pails. There is also a dedicated Fire Rake and Shovel to the left in the first room, on the wall, as shown on the diagram.

Using a Fire Extinguisher:

1. Pull the pin. Hold the extinguisher with the nozzle pointing away from you and release the locking mechanism.
2. Aim low. Point the extinguisher at the base of the fire.
3. Squeeze the lever slowly and evenly.
4. Sweep the nozzle from side-to-side.

Note: If there is a grass fire and it is obviously out of your control, please call Phil Bean at Tolko 250-318-4975 and 1-800-663-5555 or (*5555 from a cell phone) as soon as possible and report the fire.

The diagram below shows the Hangar locations for Exits, Fire Extinguishers and First Aid Kit. The Double Tractor Garage doors are secured on the outside and shouldn't be considered an Exit when closed.



Modelling Rules

MAAC Approved Modeling Categories

The following categories of MAAC modelling are approved at this site/event. In addition to the MAAC Safety Code, there may be site specific rules contained in this document.

Approved Category	Weight/Power Limits	Altitude/operating limits
mRPAS	Less than 250 grams	400'agl
RPAS	25kg or less	400'agl/600'agl
Tethered (Control-Line)	Not approved	
Free flight		
Space Models	1.5kg/F engines	500'agl
Surface Vehicles	Not approved	

MAAC Approved Site Add-Ons

The following "add-ons" have been approved at this site, provided all relevant MAAC rules, policy and SFOC conditions are adhered to by the site and its users.

Approved Add-on	Weight/Power Limits	Altitude/operating limits
RPAS Weight (25-35kg)	Not approved	
RPAS Altitude	Less than 25kg	600'agl
RPAS Altitude and Weight >25kg	Not approved	
RPIC	See section below	600'agl

RPAS/Model technical specifications or requirements or restriction

1. mRPAS requirements - mRPAS cannot be registered with Transport Canada. mRPAS are however regulated under CAR900.06 and part VI of the CAR. Compliance with MAAC safety code meets those requirements. . mRPAS at advertised events must comply with the MAAC Event SFOC.
2. RPAS CAR requirements - There are no restrictions on RPAS operating below 400'agl or weighing less than 25kgs. All RPAS operating over 400'agl must conform to the MAAC Manufacturer Declaration/Safety Assurance provision.
3. Club/Site/Event requirements - None
4. MAAC Add-on requirements – RPAS operated over 400'agl must comply with the MAAC/SFOC RPAS requirements listed in the add on section. All event visitors must be briefed to ensure compliance with these requirements.

RPAS pilot/operator qualifications or requirements

1. mRPAS requirements – mRPAS do not require an RPAS operators' certificate however are regulated under CAR 900.06 and part VI of the CAR. Except for Advertised Events, **there are no MAAC or CAR age restrictions on mRPAS flight**.
2. RPAS Pilot CAR requirements. All RPAS pilots using this site must have BASIC or Advanced (choose) RPAS certification.
3. Club/Site/Event requirements.- None.
4. MAAC Add-on requirements – RPAS Pilots operating over 400'agl must comply with the MAAC/SFOC pilot requirements listed in the add on section of this document

Crew qualifications or requirements

1. mRPAS requirements - mRPAS do not normally require crew under the CAR.
2. RPAS CAR requirements - The VO may be any responsible person who has been briefed on the site procedures. MAAC members are preferred
3. Club/Site/Event requirements – None
4. MAAC Add-on requirements - RPAS Pilots operating over 400'agl must comply with the MAAC/SFOC pilot requirements listed in the add on section of this document

<u>Visual Observers</u>

1. Visual observers (VO) are mandatory for RPAS operations in controlled airspace, above 400'agl, RPAS events open to the public or where specified by MAAC. However, the use of visual observers to alert pilots to presence to full sized air traffic is strongly encouraged. When required at this site, no member shall operate an RPAS unless:
   a. A visual observer(s) is present who has been briefed or trained on any site/event procedures upon spotting a potential conflict with full-scale aircraft. Any responsible person can be trained/briefed to be a VO. This includes spouses, children of appropriate maturity, or friends.
   b. A minimum of one visual observer per flight line is required.
   c. VO to be briefed to watch for VFR aircraft transiting north/south along highway. Medevac helo traffic from Kamloops may be at low level (below 1000'agl)
   d. VO must not watch the models – their sole role is to scan the surrounding sky for approaching full-scale aircraft.
   e. Position the VO where they have unobstructed sight lines is important – sitting in the shade beside a camper/structure is not acceptable. Equally they must be situated to have a reasonable communication ability with all pilots/modellers.
   f. Use visual aids as required – sunglasses, wide brim hats, sunshades, binoculars or similar. If positioned far from pilot stations, provide suitable notification means such as air horns, lights, radios etc.

2. Per CAR (901.23(vii)) each site must have rules to ensure a clear full-scale detection and avoidance command/response protocol is in place – there is no time for debates or confusion. MAAC has adopted the following minimum:

   a. **MAAC models/RPA shall give way/get out of the way of full-scale aircraft in all circumstances – no exceptions. There is never any onus on full-scale pilots to yield to models – ever.**
   b. Upon spotting/hearing or being advised (ATC or otherwise) of any airplane that might pose a hazard with modeling activities, the VO or any other person on site, shall yell in a loud clear voice "AIRPLANE". **If in doubt, issue the warning.**
   c. Upon hearing this command, all pilots shall descend to as low as altitude as safely possible, and if required land. The goal is to vacate the airspace vertically and then determine if RPA can continue to operate safely.
   d. **Lateral deconfliction maneuvers are prohibited above 60'AGL.** Descending to 60'agl (tree top level) is the accepted Transport Canada initial response. Members operating near/off aerodromes have different specific response requirements.
   e. Upon determining the full-scale aircraft is no longer a threat, the VO or other persons shall yell in a loud clear voice "ALL CLEAR".
   f. If any "official person" such as a peace officer, ATC or their delegate, has given a stop flying order, guidance or similar, all model flying **shall** stop immediately and shall not resume until permission to do so is obtained from person or body that issued the stop flying order.
   g. Thereafter modeling activities may resume as normal.

Program Director, Air Boss, ATC Coordinator

This site is in uncontrolled airspace – a Program Director or an Air Boss is not required

RPIC – RPAS Pilot in command

These are the options for any MAAC member to provide RPAS Pilot in Command (RPIC) direct

supervision to another person at this site. **THESE RULES ARE SPECIFIC TO THIS SITE.**

1. **Basic RPAS Certificate Holder - Direct Supervision options** – any MAAC member with a current and valid Basic RPAS certificate may perform RPIC duties as follows:
   a. supervise a **single** non-certificate holder at a Basic site
   b. Shall not supervise a group of other people regardless of any certificates.
   c. Shall not supervise any other member in any "advanced scenario".

2. **Advanced RPAS Certificate Holder - Direct Supervision options** – any MAAC member with a current and valid Advanced RPAS Certificate may perform RPIC duties as follows:
   a. supervise a **single** non-certificate holder at **any site** or Basic scenario,
   b. supervise up to 5 "Basic" Certificate holders in **uncontrolled airspace** advanced scenarios, as outlined in site rules.

3. **PPL+ with no RPAS Certificate - Direct Supervision options** - any MAAC member with a current or expired PPL, may perform RPIC duties as follows:
   a. supervise a **single** non-certificate holder at any Basic site,
   b. .
   c. supervise up to 5 Basic Certificate holders in **uncontrolled airspace** advanced scenario, as outlined in site rules.

   Notes:
   d. PPL+ only holders may not independently operate an RPAS in basic or advanced scenarios unless supervised by an appropriately rated RPAS Certificate holder A PPL+ only holder cannot supervise another PPL+ only holder while in controlled airspace – at least one person must have at least a valid basic RPAS operators certificate. If the PPL+ has a valid and current RPAS operators certificate, then the higher of either provision applies.

4. **RPAS Flight Reviewer – Direct Supervision options** – any MAAC member with a current and valid Flight reviewer Certification may perform all the duties of an Advanced RPAS Certificate holder. RPIC does not affect the Transport Canada flight reviewer program or CAR regulations associated with it.

NOTE - While able to provide direct supervision (only), RPIC members cannot operate an RPAS on their own, unless they meet the CAR RPAS Pilot certification level (Basic or Advanced). Meaning a member with a PPL **only** cannot legally fly an RPAS in Canada, unless supervised by a Basic or Advanced RPAS Certificate holder. Equally, two PPL holders do not equal one RPAS Certificate holder and cannot supervise one another – one of them must have a valid RPAS certificate for the airspace/scenario being conducted.

See RPIC Add-on Section below for rules, procedures and details

Instructors/Demo flights
Any club member may provide a demonstration flight to a non-member provided they are using a "buddy-box" type system where they can take control of the model immediately. Handing the transmitter back and forth is not acceptable.

Spotters
Spotters should be used any time there more than 1 pilot stations in operation. Helper and mechanic use are up to each individual member to decide.

Airspace Requirements Or Permissions

This site is in uncontrolled Class G airspace.

The nearest controlled airspace vertically is Class E Kamloops Transition area at 700'agl.

The nearest controlled airspace lateral is Kamloops (CYKA) Class E control zone located 5.7nm SW.

Adjacent Aerodromes
There are no adjacent aerodromes within 3nm of this site and no full-scale flight paths to affect our RPAS activities.

Normal mRPAS/RPAS/ model operating Procedures

1. Prior to daily operations, an RPAS Wilco site survey shall be consulted. MAAC endorses the use of a single shared RPAS Wilco site survey provided:
   a. A new site survey is conducted/checked at least once every 56 days (NAV CANADA schedule), and if there are changes the updated site survey is made available to all members.
   b. All site survey information is readily available to all RPAS pilots on site (electronically or in print).
   c. Prior to each flying session, members must check Aviation NOTAM for critical flight safety information, or changes to airspace or aerodromes. Members may share NOTAM information verbally or in print with other members at the site.
   d. Members must confirm there are no changes to site layout affecting distances to unsheltered bystanders
   e. Members must each visually confirm no changes to site obstructions, local obstacles and that weather conditions stipulated in any MAAC requirements are met.

   NAV CANADA 56-Day Publication schedule - ensure you complete a new RPAS Wilco Site Survey on these dates:

2025	2026	2027	2028
20-Feb-25	22-Jan-26	18-Feb-27	20-Jan-28
17-Apr-25	19-Mar-26	15-Apr-27	16-Mar-28
12-Jun-25	14-May-26	10-Jun-27	11-May-28
07-Aug-25	09-Jul-26	05-Aug-27	06-Jul-28
02-Oct-25	03-Sep-26	30-Sep-27	31-Aug-28
27-Nov-25	29-Oct-26	25-Nov-27	26-Oct-28
	24-Dec-26		21-Dec-28

2. The MAAC mandated minimum weather conditions to commence or continue MAAC RPAS operations are (you may use Kamloops CYKA aviation weather (METAR) available at RPAS Wilco site or NAV CANADA weather portal as an approximation):

   a. no cloud ceiling (BKN or OVC) estimated less than 1000’ above the site approved altitude, and
   b. the RPA will be able to remain 500’ vertically and 1 sm (statute mile) horizontally clear of any cloud, and

c. an estimated horizontal visibility of 3sm (5km) or more around the flying area, and
d. no other local obscuring conditions (fog, smoke, haze etc.) exist which could make spotting full-scale aircraft difficult.

NOTE – RPAS pilots may estimate cloud ceilings and visibility, provided they do so in good faith understanding the purpose of weather limits is to ensure we can see approaching full-scale aircraft.

2. Each RPAS pilot is responsible to ensure the following MAAC procedures and requirements have been met prior to commencement of any RPAS operation:
   a. Any required MAAC manufacturer declaration provisions have been met, including all RPAS technical specifications verified, pilot and crew requirements, and
   b. All RPA and required equipment have been maintained and all mandatory actions completed before the flight, in accordance with the manufacturer declaration and
   c. all paperwork such as pilot declarations, required operating manuals or similar is present, and
   d. That any required crew members are properly qualified, have made any required declarations and are briefed on the operation.

3. Members shall not operate an RPAS at night unless it is brightly lit, weighs less than 25kg, and remains below 400'agl. Members shall use the Kamloops weather channel time to determine legal night.

4. Pilots may fly in formation provided they agree to do so.
   a. Under normal circumstances, a maximum of five (5) aircraft may be flying at one time at Tolko Field. Three or more at the same time require spotters for all aircraft.

5. All pilots shall refer to the map/diagram for normal site set-up areas such as parking, spectator areas, pit, or assembly areas, and start-up/run-up areas including confirmation of the MAAC required buffer distances.

6. MAAC required buffer distances are variable and at this site are:
   a. 7m flight line to pilot stations, 10m to pits, 30m to spectator and parking.

7. All models will be assembled in the pit or designated assembly area. Unpowered testing of controls and failsafe may occur here as well. All powered testing must occur in a start up area.
   a. Any operation relying on the MAAC Manufacturer Declaration must confirm that RPA failsafe settings are active.

8. All models, including electric powered models, will be restrained before being tested, armed or started in the designated startup areas.
   a. All models, including electric powered models, will be restrained before being armed or started in the designated start-up areas.
   b. No breaking in engines in the pit area while other members are flying.
   c. No taxiing in the pit area. Engines off when clear of runway after landing

9. Refer to the attached map for a depiction of the flying area, including any no-fly zones, a description or depiction of the flight line, safety line, runways, taxiways, and any other pertinent flying area demarcation.
   a. Rocket launches are not allowed during RPAS operation.

b. No flying over any general area where field workers or equipment are active. Note: The presence of active field workers could easily require that no flying take place at all
c. No Flying or landing behind the Flight Line, no matter how far away from the runway. See the maps at the end of this document for clarification of where the Flight Line is.

10. The following are the site take-off, approach, landing and recovery procedures:
    b. Recommended flight time is a maximum of 15 minutes per flight. Gliders may be exempt if they maintain sufficient height and distance from motorized planes.
    c. Hand launching and bungee launching shall be done in agreement with any pilots flying – normally off to one side of the pilot stations.
    d. Pilots should loudly announce their intention to take off, the direction they are taking off to, landing, touch and go, etc. and other pilots on the flight line should acknowledge the announcement
    e. Pilots shall take off into the prevailing winds, or otherwise in agreement with all pilots flying.
    f. For everyone's safety, pilots at Tolko Field, should not allow their aircraft to become airborne until it has passed the last flight station. And likewise, when landing.
    g. No person shall proceed past abeam the pilot stations without permission of other pilots flying.
    h. If a pilot needs to cross the runway to retrieve a plane on the grass runway while other planes are flying, the pilot retrieving shall obtain verbal permission from all other flying pilots, prior to proceeding. Thereafter no new models may take-off until the downed model is recovered. No flying directly over the recovery crew.
    i. If a pilot needs to go out into the long grass or wooded areas, they will wait until all planes have landed, then place the Traffic Safety Cone in the centre of the runway (Tolko Field), before proceeding. Once they have returned and retrieved the Traffic Safety Cone, flying may commence. At no time will pilots fly when the cone is on the runway.

Non-RPAS Normal Modeling procedures

Space model operations

The following is our normal operating procedures for launching space models.

1. A fire extinguisher must be present for all rocket launches/operations.
2. All pre-flight inspections or assembly shall be done in the designated area.
3. Batteries shall not be connected to launch/ignition equipment unless the model is on the launch pad either restrained or ready for launch – no exceptions.
4. Our launch and recovery area is illustrated in the field layout drawing below – including any no-by-stander zones. NOTE – MAAC has variable rules stipulating NO bystanders permitted within certain distances of any launch/recovery area. Launch observers will be in the area behind the fences and or in the viewing area of the sunshade behind a barrier.
    a. Orange safety cones/pylons must be set up 15 meters around the outer edge of the launch area – at 3 meter intervals.
    b. yellow surveyors' tape must be attached to the safety cone markers on the south side of the launch area, to alert bystanders of the launch and recovery area.

5. No launches will commence until half an hour after sunrise and will end a half hour before sunset, the time of which is available on the Weather Network App for the town of Kamloops. Night launching is not allowed at this site.

6. We use solid propellant Estes Rocket engines up to an E size. Most rockets launched are in the B-D size range.

Aviation safety

1. No space model launches will occur below the site mandated weather minimum. Members may determine the weather themselves with direct observation or use any other source:
   a. If cloud is present below 1000' above the model flying area (above max rocket expected altitude)
   b. a horizontal visibility requirement of less than 3sm around the modeling area, and
   c. if there are other obscuring conditions (fog, smoke, haze etc.) which could make spotting full-scale aircraft **or bystanders** difficult.
2. There are 3 aerodromes/waterdromes as listed in the Canada Flight supplement located south of this site:
   - Kamloops (CAH7) waterdome 10.51 nm SW
   - Kamloops Airport (CYKA - aerodrome - cert) 10.72nm SW
   - Kamloops (CBC4 Heliport - cert) Royal Inland Hospital 10.6 nm S

   The aerodrome traffic pattern does not normally come over our launch site, however we can see the occasional transient aircraft.
3. No member may launch a rocket unless 10 seconds before launch and again immediately before ignition they conduct a 360-degree scan of the sky for any full-scale aircraft which may enter the rocket flight envelope during ascent or descent.

   The following are required procedures to assist in ensuring aviation safety:
   a. Prior to inserting the launch key, or otherwise arming the launch system, the modeler or their spotter shall scan the sky in a full 360 degrees for any approaching full-scale aircraft. The countdown shall not commence until all involved are satisfied there is a safe launch window.
   b. If prior to launch, any member spots an approaching full-scale airplane they are to yell our "AIRPLANE" in a loud clear voice.
   c. Upon hearing this, any persons controlling the launch shall immediately render the launch system inoperative (remove launch key, remove power etc.) and stop all launch activities.
   d. The involved members shall then monitor the full-scale aircraft and not resume launch activities until they are assured there is no safety risk.
   e. At the 5 second mark, the launch officer shall pause the countdown one more time to scan the sky one more time. If all clear, then commit to the launch procedures.

Public safety

1. All members shall ensure that the launching area is clear of all obstructions and persons except for mechanics and/or officials.
2. MAAC "spotters" are mandatory at this site for all model rocket launches. The following are site procedures for ensuring by-stander safety:
   a. When any member or other person spots a by-stander approaching the launch or recovery area that might present a safety concern, they are to yell out "BY-STANDER" in a loud voice.
   b. ALL members must immediately stop any launch preparations and disarm the power/launch system.
   c. If a model has already been launched, the spotter or modeler should endeavor to warn the bystander to remain clear of the launch/recovery area and outside the safety buffer distance. Yelling in a firm loud voice "STOP - stay back" and waving your arm(s) is suggested.

Member safety

1. Launch sites must be roped-off with hi visibility tape and/or marker pylons and rope to restrict access into the launch area and keep guests and spectators a safe distance back from the launch site.
2. When Space modelling is to take place at the Kamloops Model Airplane Society flying area, an advanced notice will go out advising all club members. No RPAS flying is to take place when Space modelling activities are taking place.

Emergency Procedures

Fly-away or lost link.

RPAS pilots are required to know who to notify in the event of a RPAS fly-away outside our MAAC approved flying areas **which could reasonably enter** the nearest controlled airspace volume. Note this process is not required for temporary flight immediately outside the MAAC approved flying area, or for known crashes/off site "landing" outside the MAAC approved flying area.

1. If you experience a RPA fly-away, and in your judgement as the RPA pilot in command (including RPIC scenarios) the RPA has sufficient energy or capability to fly to and enter the identified controlled airspace volume (either laterally or vertically, or both), you are legally required to attempt contact with listed agencies below and advise them of the fly-away situation.

2. MAAC has assessed this site and determined the following:

   This site is wholly in uncontrolled airspace. The nearest controlled airspace volume is

   a. Laterally

Nearest Controlled Airspace – Fly-away - Laterally				
Altitude	Name, Class, Type	Distance and Direction	Altitude	Contact Info
Below 400'	CYKA Class E CZ	5.72nm SW	SFC to 2800'	Vancouver Flight Information Region (604) 586-4500
Above 400'	Same			

   b. Vertically
   If you experience a fly away while operating at higher altitudes (above 400'), or if the model is climbing uncontrollably and in the pilot in command's judgement may enter overlying or adjacent controlled airspace, contact the listed agency as soon as possible.

Nearest Controlled Airspace – Fly-away - Vertically				
Location	Name, Class Type	Based at	Other	Contact Info
Over site	CYKA Class E TA	700'AGL		Vancouver Flight Information Region (604) 586-4500

Incident Accident

1. If there is any type of near miss or safety concern between a full-scale aircraft, bystander and our RPA/models, **ALL FLYING/MODELLING** SHALL cease immediately. The members involved should fill out a MAAC reportable occurrence report and submit that to MAAC and the Site/Event organizer and follow MAAC policy.
   a. If the member(s) involved believe the risk was very minimal, they may complete their own self declaration or risk assessment using the MAAC form. Submit a copy of the form to the Site/Event organizers when able and recall if this involved RPAS you must keep this form for one year (CAR901.49 (2)). Resume flying/modelling when done.
   b. If the member or Site/Event operators deems the event serious, flying/modeling will not resume until members are given permission by the Site/Event organizers – in writing.
   c. If there is physical contact between a full-scale aircraft, a by-stander, a spectator and a MAAC RPAS/model – all flying/modelling will cease until MAAC confirms you may resume operations.
   d. This process is for **your** protection.

Transportation Safety Board (TSB) Protocols

1. In addition to MAAC reporting requirements, according to TSB Regulations and policies, RPAS occurrences shall be reported to the TSB to 819-994-3741 or 1-800-387-3557 as soon as possible after the occurrence:
   a. if an RPA with a MTOW (maximum take-off weight) greater than 25 kg is involved in an accident as defined in 2(1)(a) of the TSB Regulation;
   b. if a person is killed or sustains a serious injury as a result of coming into direct contact with any part of an RPA, including parts that have become detached from the RPA; and
   c. if a collision occurs between any RPA and a traditional aircraft.

A full report shall be forwarded to the TSB within 30 days of the occurrence:
https://www.tsb.gc.ca/eng/incidents-occurrence/aviation/index.html

Model damage/repair protocol

1. In the event of any normally expected modelling mishap which requires any degree of repair, the model may only be "field repaired" if all normal modelling supplies and tools are present and used in accordance with established modeling practices or manufacturer instructions.
   a. Any repair other than minor (replacing broken propeller etc.) shall be treated as a maiden flight/operation. Ensure RPAS logbook entries are made.
   b. Any repair that cannot be fixed at the field, shall only be repaired at the modellers/owners shop or other repair facility. Ensure RPAS logbook entries are made.

Service Difficulties

A service difficulty is defined as any condition that affects or that if not corrected, is likely to affect the safety of aircraft or any other person. As MAAC has made a safety assurance declaration to Transport

Canada that is used in many of our RPAS flying privileges, it is critical and a regulatory requirement MAAC is informed of any issues related to our safety assurance declaration. Bear in mind MAAC has fully adopted a Just Culture and will not penalize or discipline members for reporting safety concerns, not matter how large or small, when done in good faith.

1. If a mRPAS or an RPAS is being operated under any manufacturer declaration (MAAC or other), the RPAS pilot shall ensure, without delay, a report is filed with the manufacturer if they encounter any of the following:
   a. Any inability to meet the position determination standards (Standard 622) associated with the manufacturer declaration, related to equipment or the performance of equipment.
   b. Any failure of a critical command and control component not attributable to normal wear and tear or obvious misuse (example dead/low battery), and
   c. any other aspect of RPAS operation where the safety assurance declaration was not met.

MAAC Add-ons

RPAS Operations Above 400'AGL

MAAC has conducted an airspace and site review per the SFOC SORA (specific operations risk assessment) and determined the following requirements for members to operate an RPAS above 400' at this site.

Airspace Assessment

There are no controlled airspace volumes (based at the SFC or starting higher) within 2nm laterally of this site. The nearest controlled airspace laterally is the Kamloops Class E Control Zone (CZ) located 5.72nm southwest. Controlled airspace vertically over this site is based at 700'AGL (CLKA Class E Transition Area (TA)).

1. RPA are required to remain 500' below the base of any overlying controlled airspace, and 2nm laterally clear of any controlled airspace volume. However, MAAC may authorize reductions in of 100' below class E TA airspace, therefore **the highest altitude MAAC can approve is 600' AGL (above ground level).**

Sufficient Communication requirements

There are no aerodromes within 3nm of this site. The CYKA aerodrome traffic pattern is east west in a valley and well clear of the site. However, there is a published VFR route north south along Highway 5 which may be used by helicopter traffic departing Kamloops Royal Inland Hospital. Assessment of the normally expected traffic patterns yields the following:

1. Prior to commencing RPAS operations above 400'agl, the VO shall be briefed to exert extra visual care for northbound low level helicopter traffic following highway 5.
2. While operating RPA above 400', the VO **or** another responsible person may monitor aviation communications on VHF frequency Kamloops Radio 125.7. This is 100% optional.

Visual Observer (VO) assessment

The location of the pilot stations, general assessment of the topography and direction of the flight line and flying area generate the following requirements for the VO:

1. At least one VO shall be positioned near the flight line, within earshot at normal conversational voice levels. If needed, equip the VO with a noise making device to supplement any aircraft warnings.
2. The VO shall be equipped with any support equipment determined by the club to be relative to the duration of duties, such as water, a chair, or shade from the sun provided it does not interfere with VO duties.
3. As the MAAC approved altitude flying area is within 2nm laterally or 500' vertically of adjacent controlled airspace, the VO cannot assume any other role.

The Club/site/event shall:

1. Ensure a copy of the MAAC SFOC #930433 and SFOC application form 26-0835 are present and available to all RPAS pilots when operations are occurring.
2. Ensure a copy of these rules, in their entirety are available to all RPAS pilots at the site.
3. Communicate to all Club members and mark this site as closed for RPA operations above 400'AGL, **if there are any substantial changes to the site survey criteria** (CAR901.27 a through h), unless or until MAAC has been advised, has conducted a new SORA, and issued new permission.

The RPA pilot shall:

1. **Only** operate an RPAS registered, declared and meeting the MAAC Manufacturer Declaration requirements. Other manufacturer's declarations are **not** transferable to this policy.
2. Not operate an RPAS above 400'agl unless in possession of a valid and current Advanced RPAS operators' certificate, or under the direct supervision of an RPIC in accordance with MAAC policy.
3. Ensure all RPAS pilot CAR and SFOC paperwork requirements have been met and are available,
   a. Certificates of registration, pilot RPAS certification and recency proof,
   b. Govt issued photo identification,
   c. Manufacturer owner's declaration for each RPA,
   d. An altitude determination declaration as appropriate (pilot or each RPA) and
   e. RPAS Pilot has completed Crew training and fitness requirements and signed declaration.
4. Ensure a recent site survey and NOTAM check have been completed,
5. Ensure any crew declare themselves as properly trained in accordance MAAC policy. Verbal confirmation is sufficient.
6. Ensure the RPA meets the MAAC technical requirements, including the MAAC Manufacturer declaration, before flight commences, and terminate any flight if technical requirements are no longer met.
7. Ensure the RPA is operated VLOS only (no FPV permitted – including with a spotter) and that it remains within the site approved flying area at all times.
8. Ensure the RPA does not carry "cargo" or any other items onboard that are not required for flight. On board cameras and associate gear are permitted provided all components are securely affixed to the airframe or housed in a compartment that cannot be easily opened in flight.

Any RPAS Crew shall:

1. Ensure all SFOC paperwork requirements have been met and are available (crew training declaration)
2. Comply with the instructions of the pilot in command
3. Perform their duties diligently and in accordance with MAAC policy and
4. Inform any person responsible of any issue that prevents them from meeting their obligations.

The RPA shall be equipped with

1. Functional "fail- safe" type device(s) or design per the MAAC manufacture declaration.
2. Anti-collision beacon/light(s) per MAAC policy,
3. Sufficient fuel/energy to complete the intended flight duration, plus 25% at the minimum throttle setting sufficient for controlled level flight and includes a MAAC required minimum reserve to enable one balked landing/missed approach and circuit back to a successful landing. Fuel/energy spent taxiing to the pits or any shut down procedures thereafter does not count in these calculations. Non-powered RPA (gliders) must have sufficient receiver battery power for the flight plus reserves as noted above, excluding a balked landing attempt.

MAAC Declared minimum fuel/energy guidelines 25%		
Intended flight duration	Required reserve (@25%)	Total Fuel/energy required
15 mins	3.75 mins	18.75 mins
10 mins	2.5 mins	12.5 mins
6 mins	1.5 mins	7.5 mins
5 mins	1.25 mins	6.25 mins
3 mins	45 seconds	3 mins 45 seconds

RPAS Operations Above 25kg

This site has not been approved by MAAC to operate RPAS weighing more than 25kg.

RPAS Pilot In Command

General site rules – More than one-to-one Direct Supervision

This sites is in **uncontrolled airspace only**, MAAC allows more than one-on-one direct supervision provided the terms of this program are met. RPIC in this regard is not to be considered RPA instruction or how to fly – its intended to be supervised flying of **competent students** who do not possess the correct ratings or paperwork. The following constitutes the MAAC program under the MAAC Manufacturer declaration instruction provisions:

1. The primary role of the RPIC is to provide airspace regulatory compliance, safety and situational awareness. In one to five scenarios, the RPIC is not expected to provide hands-on "instruction" to each student, which is why each student must possess at least a Basic RPAS operator certificate and competent RPA piloting experience.
2. In all cases, the RPIC is the "control station" and while RPIC is being provided their decisions, directions, and commands on the flight line are final and definitive as follows:
    a. No other person, including Club or event officials, shall attempt to override or countermand a RPIC command related to the provision of the RPIC program.
    b. The RPIC, however, shall obey all cease flying orders based on decisions or directions of Site, Club or event officials.
    c. The RPIC shall obey any flight safety directions issued by other members, such as detect and avoid call outs "Airplane" and shall direct an appropriate response to all students without reservations or delay.

3. All students shall be briefed and agree the RPIC is in charge and all his decisions, commands and instructions are final and shall be complied with immediately, including up to potential destruction of the RPA (intentional crashing in a safe location/manner).
    a. Students shall not start or arm or otherwise make an RPA ready for flight unless directed by the RPIC.
    b. No student shall move an RPA from any designated start up area until directed to by the RPIC. The intent being an orderly "launching" of all models under the RPIC control.
    c. No student shall take off or launch an RPIC unless permitted by the RPIC. Such permissions may be issued to all students/pilots or given individually.
    d. Thereafter, once their RPA is airborne, the students shall operate their RPA independently, but under the general direction of the RPIC.
        i. RPA to RPA traffic patterns, collision avoidance and similar remain the domain of the students, unless spotters or other parties intercede.
        ii. Any commands a RPICs issue to an individual RPA shall be acknowledged by the individual pilot (student)
        iii. Any group RPIC commands shall be acknowledged by all students.
    e. Students, upon hearing any flight safety directions such as "airplane" are free to comply with stipulated site responses without waiting for the RPIC to issue the command. They shall, however, confirm any such action with the RPIC as soon as possible thereafter.
    f. Any student experiencing a dead stick or urgent landing situation is permitted to take whatever actions they deem appropriate to ensure the safety of their model, and the site occupants.

g. In the event of a disagreement between RPIC and students, other site officials or members, the student shall follow the RPIC directions or commands.

4. The maximum number of students to one RPIC ratio is five,
   a. all students shall possess a "Basic" RPAS operators certificate and be able to independently operate their RPA.
   b. The RPIC shall have a valid advanced/flight reviewer RPAS certificate or PPL+
   c. The type of "instructional control" system is irrelevant (buddy-box or voice command)

5. The RPIC shall be positioned and remain within earshot, at a normal conversational level, of all students while any RPA is airborne.
   a. Conversely, regardless of physical pilot stations arrangements, RPIC shall not occur unless all students are within earshot of the RPIC.
   b. Where this is not possible, additional RPIC shall be utilized or limitations placed on the number of students to remain within earshot.
6. The site shall ban or otherwise prohibit all extraneous noise to ensure a solid verbal communication ability between RPIC and students.
7. The site rules shall contain provisions mandating the operating condition for all other categories of models.

Rules for other attendees/pilots at a site where multiple students are receiving RPIC

8. IF forming part of an RPA flight line (at the pilot stations) that includes one of the maximum allotted "student" spaces (up to 5), and where there is more than one-on-one RPIC supervision be provided,
   a. Other RPA pilots agree they **shall** follow all RPIC commands related to RPA operation as if they were a student receiving direct supervision. If they do not agree, either suspend RPIC operations or do not permit individuals to operate other RPA during the time RPIC is active – this is a site responsibility.
   b. The RPIC direction will most commonly be associated with commands to descend, land or otherwise cease RPA operations because of aviation safety concerns.
      i. This rule is intended to ensure there is ultimately no confusion about who is doing what. All other active modellers must comply, so the RPIC knows the scenario is safely under control.
      ii. Other pilots may still exercise independent control authority for landings etc., provided they inform the RPIC of their intentions.
9. NO other RPA pilot may join an already active multi-student RPIC session without the permission of the RPIC.
   a. Thereafter they agree to follow the same RPIC rules as if they were there at the start of the session.

<u>Event Approval</u>

1. ALL MAAC events that require approval or want MAAC insurance must occur at SOC sites and be approved by MAAC. All outdoor events with operable RPAS must be approved by MAAC.

2. **Outdoor events that are clearly listed as "member-only" events** regardless of reason such as competitions, fun-fly's, fly-in's, airshows, air racing, demonstrations or any other organized gatherings do **not** require MAAC Event SFOC compliance. **All advertising/notice including internal to MAAC must include the following phrase**:

This event is closed to the public - only MAAC members and crew may attend. Invited guest(s) of a MAAC member are permitted provided they are supervised.

3. **"Advertised events"** - regardless of what you "named" your event, if your outdoor event includes operable (flying) RPAS and is open/advertised to the general public in any fashion, you must meet the MAAC SFOC requirements (the SAG will work with clubs on the rules required). All advertising/notice, including internal to MAAC **must** include the following phrase:

   This event is open to the public and all MAAC members, crew, and their invited guests. MAAC Event SFOC compliance is required.

Foreign RPAS Pilots (US or other)
MAAC has already obtained Transport Canada approval for foreign RPAS pilots to operate RPAS at our MAAC sites and events (MPPD14 approved July 2023). Foreign pilots simply join MAAC and follow the provisions of MPPD14 (on the website). Also see the RPAS Wilco NOTAM (2024-02).

Over 400'agl and above 25kg - Not approved

The following are the normally expected process and rules for an event.

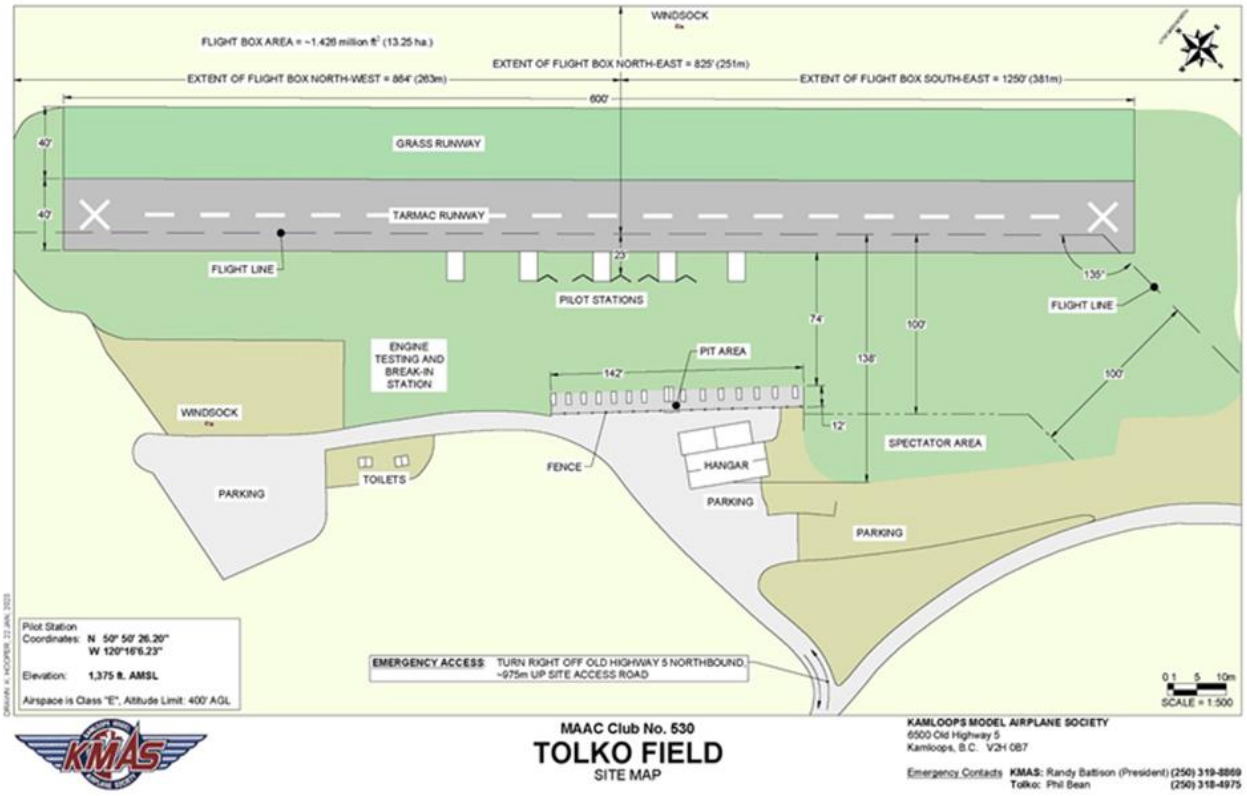
1. The club/event organizers shall:
   a. Prior to submitting an event approval application, ensure they have read all MAAC policy and have submitted an event package indicating they have complied as best as possible.
   b. Ensure the site meets all MAAC event organizational and logistic requirements such as signage, parking control, spectator safety barriers, washroom and food provisions, and fire/medical safety requirements commensurate with the expected attendance.
   c. Ensure the event complies with MAAC event policy and any CAR or SFOC requirements.
   d. Ensure all attending modellers/RPAS pilot are **current MAAC members**.
   e. Take reasonable steps to ensure all attending modellers/RPAS pilots **receive a briefing** on site or event rules using the MAAC minimum checklist (attached).

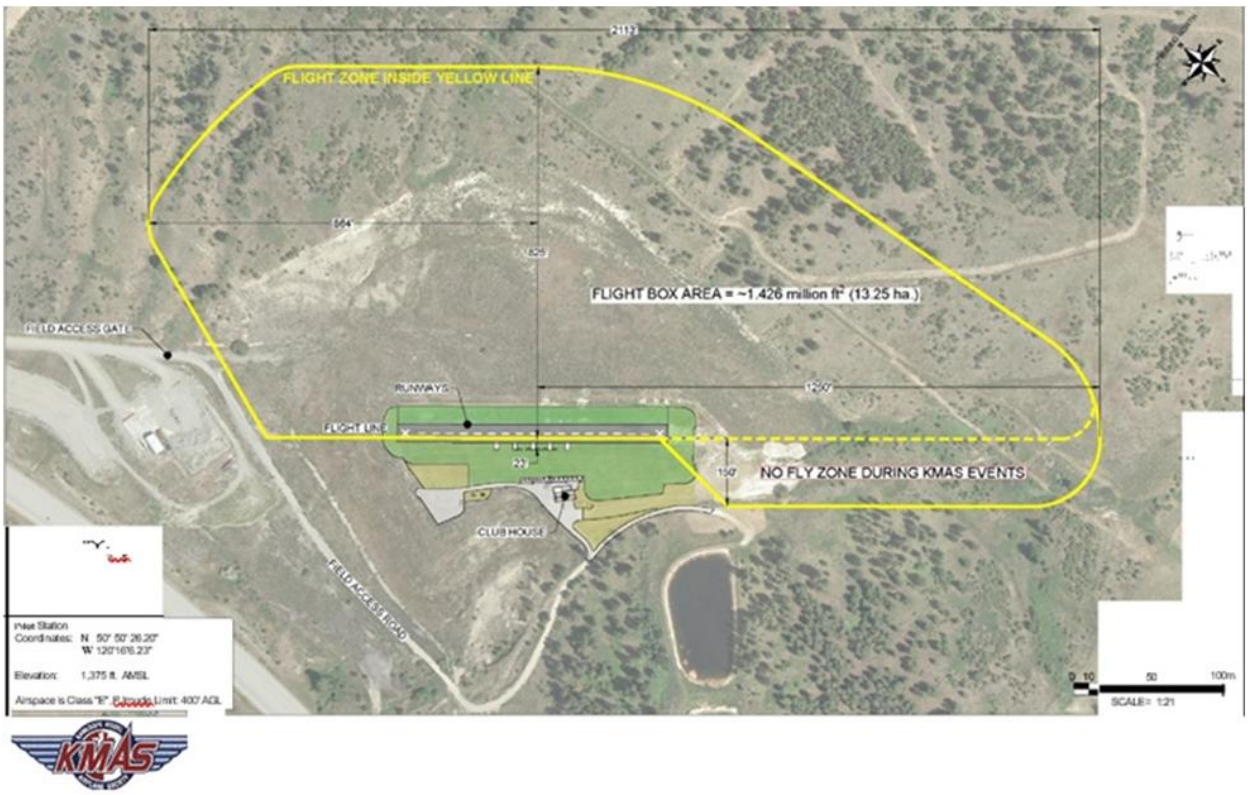
2. In addition to all the above and the club rules, at any event where the public is in attendance under the MAAC SFOC, the event organizers are responsible to ensure:
   a. MAAC warning signs are posted at all public entry points.
   b. A copy of the MAAC SFOC and application are on site and available to all RPAS pilots.
   c. All RPAS pilots sign the Transport Canada sign in sheet.
   d. All RPAS pilots receive a briefing on site rules and
   e. A visual observer is always present RPAS are flying.
   f. Ensure all follow up actions are completed after the event, most notably any Transport Canada paperwork.

3. Any member attending an event shall.
   a. Comply with all CAR, SFOC, MAAC and club/event rules as required.
   b. Not operate a model or RPAS unless they attend or obtain a pilot briefing.

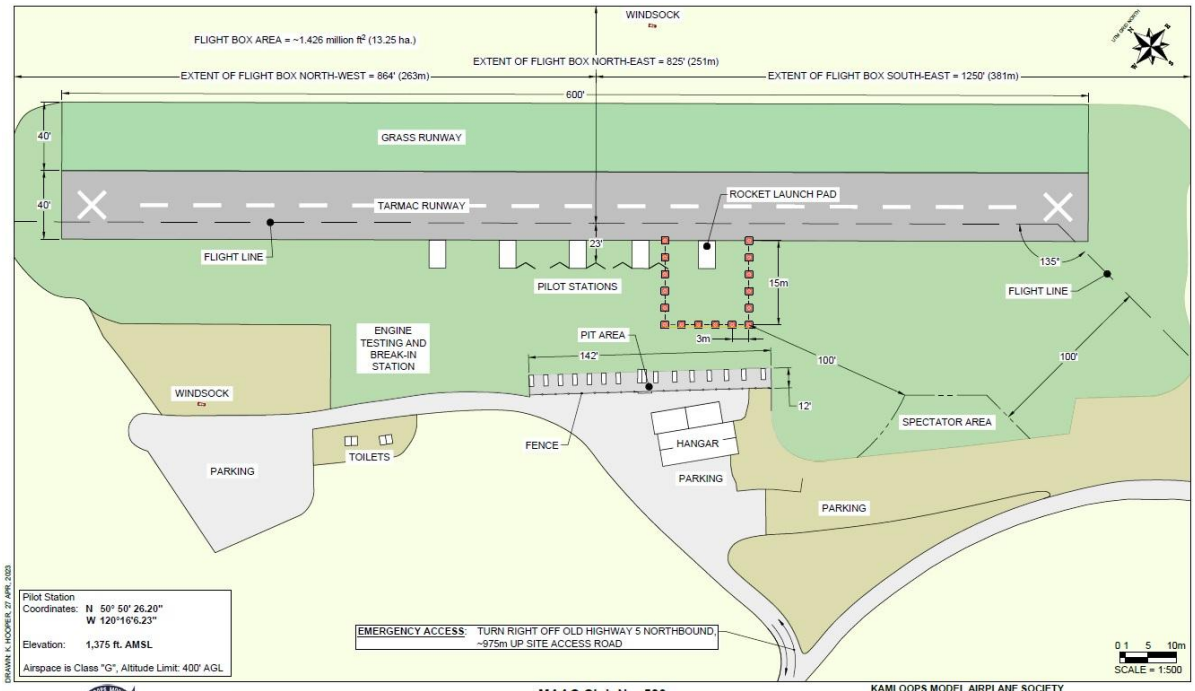
Diagrams/maps

Tolko Field Flight Map





Tolko Field Rocket Launch Layout



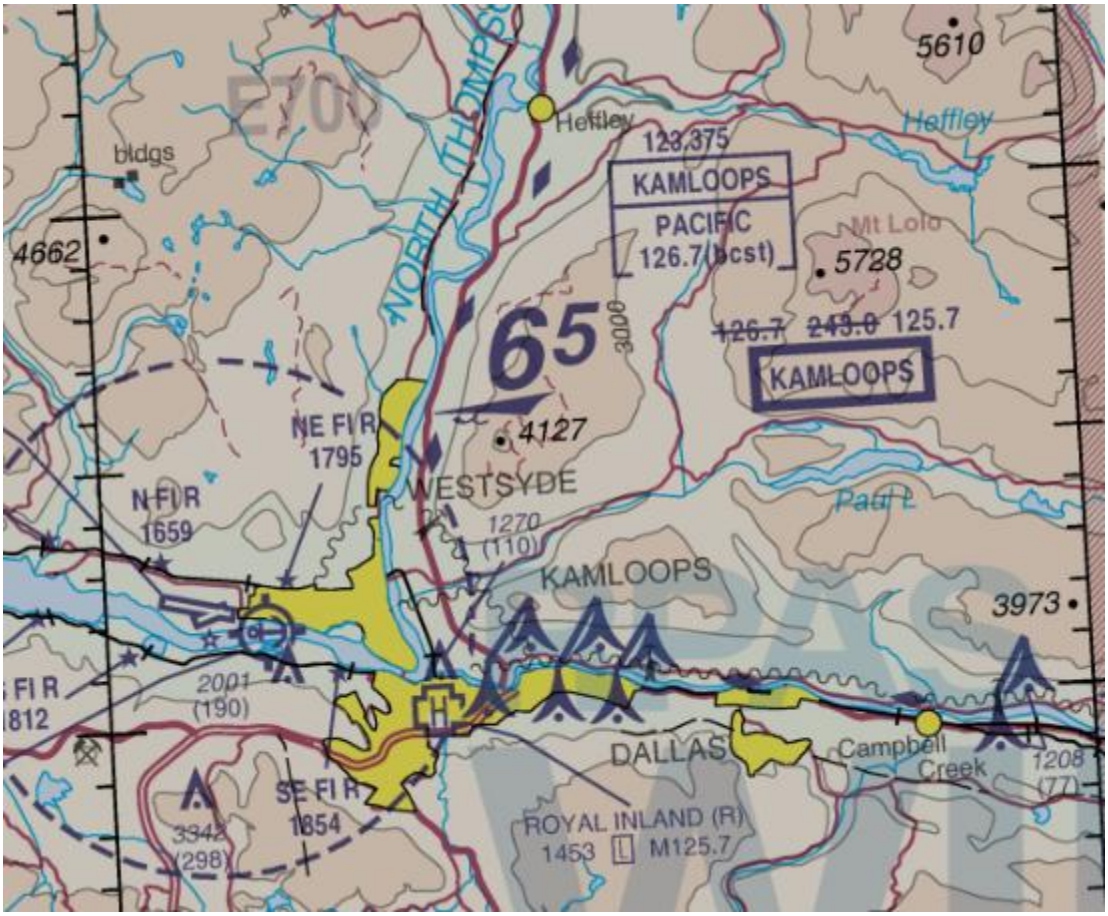
MAAC Club No. 530

TOLKO FIELD

SPACE MODELING - ROCKET LAUNCH PAD MAP

KAMLOOPS MODEL AIRPLANE SOCIETY
6500 Old Highway 5
Kamloops, B.C. V2H 0B7

Emergency Contacts **KMAS:** Randy Battison (President) (250) 319-8869
Tolko: Phil Bean (250) 318-4975


5610
Heffley
Heffley
123.375
KAMLOOPS
PACIFIC
126.7(bcst)
bldgs
4662
NORTH THOMPSON
Mt Lolo
5728
65
3000
126.7
243.0
125.7
KAMLOOPS
NE FIR
1795
4127
WESTSYDE
N FIR
1659
1270
(110)
Patt L
KAMLOOPS
3973
2001
(190)
DALLAS
Campbell
Creek
1208
(77)
SE FIR
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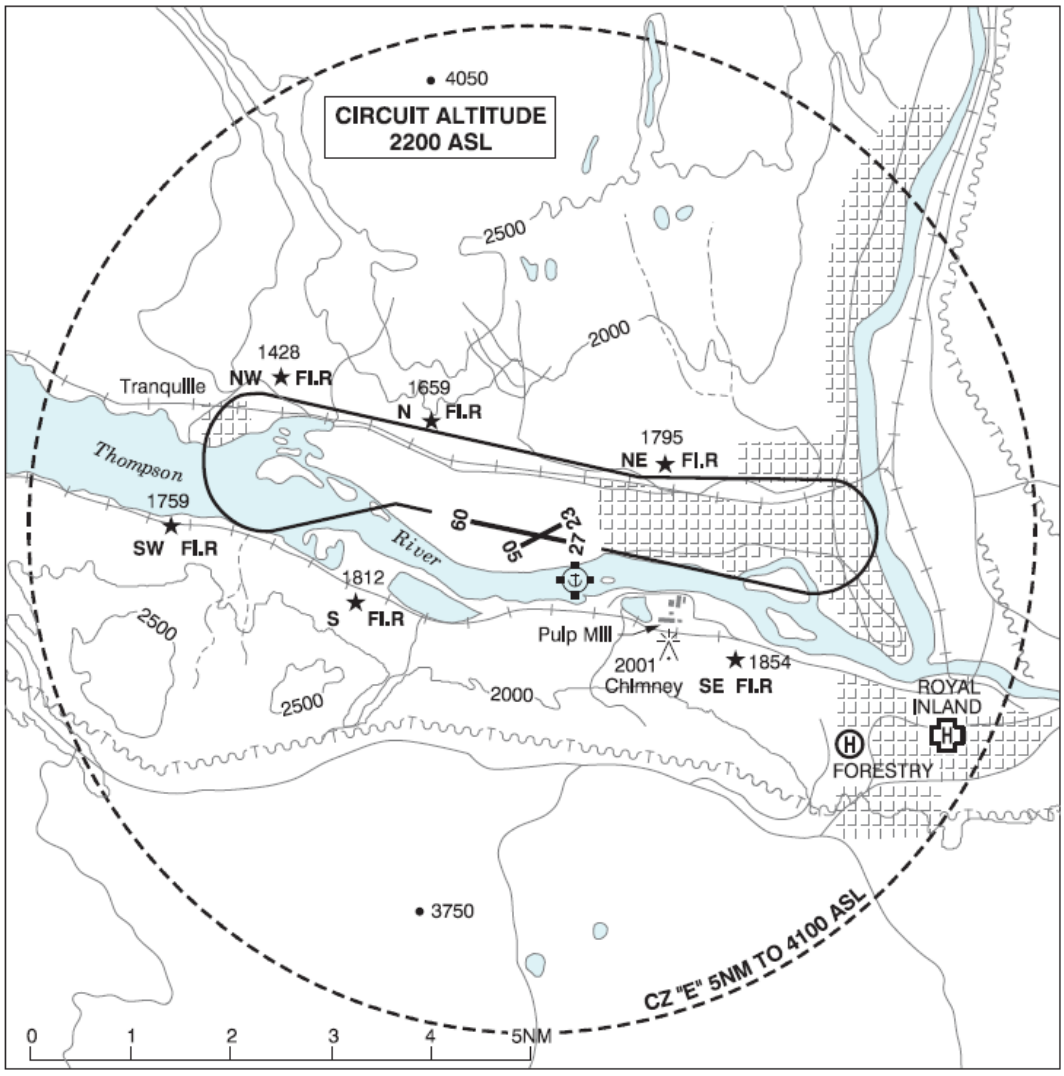
(298)
ROYAL INLAND (R)
1453
M125.7

KAMLOOPS VFR TERMINAL PROCEDURES CHART - NIGHT CIRCUIT PROCEDURE



W A R N I N G !

AEROMODELING MAY CAUSE SERIOUS INJURY!

PROCEED AT YOUR OWN RISK!

AVERTISSEMENT !

L'AÉROMODÉLISME PEUT CAUSER DES BLESSURES GRAVES!

PROCÉDEZ À VOS PROPRES RISQUES!

CLUB CHECK LISTS

KMAS recommend that all pilots get into the habit of using a Radio & Pre-Flight checklist: just like full-scale pilots, before each flying session. The purpose of pre-flight checks is to ensure that your RC plane is in a fit condition to fly, and that everything is working as it should be. Exact pre-flight checks might differ from plane to plane, but there are some fundamental checks that all RC airplanes need to have done, immediately before flight.

If you neglect to carry out the pre-flight checks before you fly your RC airplane, and something is badly amiss, then an avoidable crash is very likely. Many RC pilots have lost their beloved aircraft seconds after take-off, simply because they didn't do the checks!

PRE-START

1. All servos are secure, and linkages to servo and control surfaces are secure.
2. Servo horns and control horns are secure and not loose.
3. Servo linkages are able to move freely and are not binding.
4. All servo connections to the receiver, battery pack and ESC are secure and correct.
5. Receiver Battery - Voltage Check
6. The receiver and motor battery pack are securely fixed and cannot move during flight.
7. Receiver antenna (aerial) is correctly positioned and not damaged.
8. The propeller nut is tight and spinner is secure.
9. The wing and tail plane (and fin) are secured properly, as per the instructions (i.e. with the correct method of fixing; rubber bands or wing nuts etc.)
10. All control surface hinges are secure i.e. you can't pull the control surface away from its respective flying surface.

STARTUP

11. Aircraft Secure
12. All Clear - Ahead (prop) and Behind.
13. Radio Transmitter On, Radio Receiver On and Checked for Interference (All control surfaces stable.)
14. Run Up - Mixture Set (engine testing to take place in testing area)
15. Idle (gas) – Reliable, the motor power works correctly.
16. Fail Safe Check completed - engine running - secure aircraft - Turn transmitter off - best practice is to set the failsafe to put the aircraft into a flat spin or auto-rotation (heli) condition, so it does not fly away but comes down as gently as possible as close as possible to the location where signal was lost.
17. Transmitter Operation Check - Aircraft Control surfaces checked for correct direction. All control surfaces move in the correct sense e.g. moving the rudder stick left moves the rudder to the left.
18. Throttle set.

RANGE CHECK

The purpose of the range check is to make sure the radio signal from transmitter to receiver is strong, so that you can fly your RC airplane at a normal distance away from you, without it going out of radio range. If your plane does go out of range, then you lose all control. A Range Check should

always be performed prior to the first flight of **Each** plane, each day.

Note: 2.4GHz transmitters need to be switched to their Low Output Power mode (approximately 10%) to properly conduct the test. For 72 MHz transmitters, retracting the antenna to its minimum length diminishes the output power in the same manner. If equipped with an RF Meter, a low reading may indication a weak signal.

Perform a range check with a radio system thus:

1. Switch on the transmitter then the receiver and walk at a distance of 30-36 paces (meters) or so away from the plane. Verifying full control at ranges up to and exceeding 30-36 paces before Loss of Signal (LOS) occurs, will indicate proper transmitter and receiver function.
2. While observing the plane, test the movement of all control surfaces for full movement. If you have difficulty seeing the control surfaces, have a fellow member watch and indicate movement, or lack of. If the surfaces start 'twitching' or not responding properly to your stick movements, do not fly. Check the batteries of the radio gear, they may need replacing - low batteries in the transmitter drastically reduce the radio range. Also check for loose connections to the receiver etc., and also the condition of the antenna(s).
3. If the batteries and connections are OK but, the control surfaces still don't respond properly, then other people may be using your frequency nearby. Again, do not fly if this is the case. Interference is a big killer of RC airplanes, and you need to be sure that your frequency is clear before you get airborne.
4. Always take a few minutes to perform these RC airplane pre-flight checks before you commence your flying session. Get in to the habit of pre-flighting your plane every time; the checks take just a couple of minutes to do and will save you the grief of a crashed airplane, if something is amiss.

PRE-TAKEOFF AT PILOT STATION

5. Fly over area clear of people & vehicles – Safety Cone is not on the Runway (Tolko Field).
6. Engine check - Full Power - Performance O.K. At Inks Lake, this is performed while the plane is in the water and a second person holding the tail
7. Controls - Free and Correct
8. Rate Switches - Set
9. Trims - Set for Take-off
10. Timer - On
11. Wind Sock/direction - Checked
12. Runway - Clear
13. "Announce" - loudly announce your intention to take off and the direction you are taking off to. Other pilots should respond to verify they have heard your intention.

PRE-LANDING

14. Pilots should make every attempt to land into the wind, to control the speed of their airplane and should be aware of Cross Winds, that may cause your plane to veer towards other pilot stations.
15. "Announce" - loudly announce your intention to land and the direction you will be landing your airplane from, e.g. “From the Right or From the Left”. Other pilots should respond to verify they have heard your intention.